

## REMARKS

### I. Introduction

In response to the Office Action dated March 10, 2005, Applicants have canceled claims 1-11, without prejudice or disclaimer. New claims 12-22 are added. Support for these amendments can be found, for example, in Figs. 1, 3, 5, 7 and 9, and their corresponding sections of the specification. No new matter has been added. It is noted that Applicants submit that new claim 12 is generic and therefore reads on the elected species and the remaining claims are dependent on claim 12.

For the reasons set forth below, Applicants respectfully submit that all pending claims are patentable over the cited prior art references.

### II. The Rejection Of The Claims Under 35 U.S.C. § 102

Claims 1-3 are rejected under 35 U.S.C. § 102(e) as being anticipated by USP No. 6,535,402 to Ying. As claims 1-3 have been canceled, it is respectfully submitted that the rejections thereto are moot.

With respect to new claim 12, the exemplary embodiment recited by new claim 12 relates to a device for controlling an inverter circuit which includes in part a dead time calculating unit for calculating a first dead time and a second dead time, the first dead time determined in response to a comparison between a count value of a timer and a first value stored in a register and the second dead time determined in response to a comparison between a count value of a timer and a second value stored in a register. Claim 12 further recites a first dead time addition unit and a second dead time addition unit. As a result of this structure, the present invention can

set the first or second dead time at an arbitrary value in response to the comparison between the count value of the timer and the first or the second value stored in the register. Consequently, the present invention advantageously sets the appropriate dead time in accordance with the characteristic of the inverter circuit so as to reduce the noise and the power consumption associated with the inverter circuit effectively.

In contrast, Ying is completely silent with regard to determining the alleged first dead time and second dead time based on any *comparison*, let alone doing so based on a timer and the value stored in a register. This is evidenced by the express objective given in Ying; namely, "... providing a first dead time compensation signal based on the *pulse width modulation reference* ... generating a second dead time compensation signal instantly in response to the *detected bias current crossing point* (see, col. 4, lines 35-46)." Because the dead time comparison is performed based on the detected crossing point of the output current and the bias current, the value of the dead time to compensate depends upon the waveform of the output current.

Accordingly, Ying does not disclose or suggest "a dead time calculating unit for calculating a first dead time and a second dead time, where the first dead time is determined in response to a comparison between a count value of a timer and a first value stored in a register, and the second dead time is determined in response to a comparison between a count value of a timer and a second value stored in a register," as recited by claim 12.

Ying also fails to disclose the claimed first dead time addition unit and the second dead time addition unit. Indeed, Ying only discloses adding the dead time compensation signal to the PWM reference (see, col. 3, line 67 to col. 4, line 1 and lines 45-46). Also, it should be noted

that Ying merely adds the dead time compensation signal to the PWM reference, but does not delay the dead time compensation signal or the PWM reference in any manner. Accordingly, Ying does not disclose or suggest "... delaying a first edge of the first PWM signal by a first delay value" and "... delaying a second edge of the second PWM signal by a second delay value," as recited by claim 12.

Thus, as each and every limitation must be either disclosed or suggested by the cited prior art in order for the prior art reference to anticipate the claim, and Ying, at a minimum, fails to disclose the dead time calculating unit, the first dead time addition unit and the second dead time addition unit, it is respectfully submitted that Ying does not anticipate claim 12.

For all of the foregoing reasons, it is respectfully submitted that new claim 12 and its dependent claims are patentable over the cited prior art.

### **III. Conclusion**

Accordingly, it is urged that the application is in condition for allowance, an indication of which is respectfully solicited.

If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

**Application No.: 10/715,848**

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,  
McDERMOTT WILL & EMERY LLP

Michael E. Fogarty  
Registration No. 36,139

600 13<sup>th</sup> Street, N.W.  
Washington, DC 20005-3096  
Phone: 202.756.8000 MEF/AHC/dlb  
Facsimile: 202.756.8087  
**Date: June 9, 2005**

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